



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/790,820

03/03/2004

Fumisada Macda

249684US6

1498

22850 7590 01/24/2007
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, LINH THI

ART UNIT

PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

01/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/790,820	Applicant(s) MAEDA ET AL.	
	Examiner Linh T. Nguyen	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: in claim 1 of line 1 "less" should be "lens". Appropriate correction is required.

Claim 3 is objected to because of the following informalities: in claim 3 of line 3 "wit" should be "with". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al (JP Publication number 2000149293).

In regards to claim 1, Ito et al discloses a less drive apparatus having a movable section (Fig. 1, element 8) which is equipped with a plurality of either drive coils or magnetic field means for moving a mounted lens to an optical axis direction (Fig. M1, elements 3 and 4) and a moving direction orthogonal (Y-axis) to said optical axis direction (Paragraph [0026], line 28; direction of the tracking) and a fixed section for supporting said movable section (Fig. 1, element 11) and having either magnetic field means for said drive coils or drive coils for said magnetic field means (Fig. 1, elements

Art Unit: 2627

3,4 and 6), wherein: an x-coordinate value of a center of gravity G (Fig. 2a-c, element 17) and an x-coordinate value of a driving center Df do not accord with each other (Fig. 2a-c, element 28), provided that a z-axis is set to pass through the center of gravity of the movable section in a direction parallel to the optical axis (Fig. 2a), a y-axis is set in said moving direction of the lens (Paragraph [0026], line 28), an x-axis is set in a direction orthogonal to the z-axis and the y-axis (Fig. 4), the center of gravity of said movable section is G (Fig. 2, element 17), and a driving center of the movable section in the z-axis direction is Df (Fig. 2, element 28).

In regards to claims 2, 6 and 10, Ito et al discloses the lens drive apparatus as cited in claim 1, wherein: z-coordinate value of the center of gravity G (Fig. 2a) and z-coordinate value of the driving center Dt are approximately equal, provided that a driving center of said movable section to y-axis direction is defined as Dt (Paragraph [0026], lines 25-30).

In regards to claims 3, 7 and 11, Ito et al discloses the lens drive apparatus as cited in claim 1, wherein: a principal point of said lens (Fig. 2a-c, element 1) and the center of gravity G of said movable section approximately accord with each other (Fig. 2a-c, element 17 is the center of the lens 1).

In regards to claims 4 and 8, Ito et al discloses the lens drive apparatus as cited in claim 1, wherein: said plurality of drive coils includes drive coils for the lens in the

Art Unit: 2627

optical axis direction (Fig. 2a-c, element 4) and drive coils for the lens in the moving direction (Fig. 2, element 3); and respective said magnetic field means provided to each of said drive coils for the lens in the optical axis direction and drive coils for the lens in the moving direction are arranged across said lens (Fig. 2a-c, element 6 magnetic field is across from the lens 1).

In regards to claim 5, Ito et al discloses an optical head apparatus having an optical system (Fig. 1) including an objective lens (Fig. 1, element 1) and a light source for reading and/or recording of an optical recording medium (Fig. 23), a movable section (Fig. 1, element 8) which is equipped with a plurality of either drive coils or magnetic field means (Fig. 1, elements 3 and 4) for moving said objective lens to an optical axis direction (z-axis) and a moving direction orthogonal to said optical axis direction and a fixed section for supporting said movable section (y-axis) and having either magnetic field means for said drive coils or drive coils for said magnetic field means (Fig. 1, element 6), wherein: an x-coordinate value of a center of gravity G (Fig. 2a-c, element 17) and an x-coordinate value of a driving center Df do not accord with each other (Fig. 2a-c, element 28), provided that a z-axis is set to pass through the center of gravity of the movable section in a direction parallel to the optical axis (Fig. 2a), a y-axis is set in said moving direction of the lens (Paragraph [0026], line 28), an x-axis is set in a direction orthogonal to the z-axis and the y-axis (Fig. 4), the center of gravity of said movable section is G (Fig. 2, element 17), and a driving center of the movable section in the z-axis direction is Df (Fig. 2, element 28).

In regards to claim 9, Ito et al discloses an optical disk drive apparatus having an optical system including an objective lens (Fig. 1, element 1) and a light source for reading and/or recording of an optical recording medium rotated by rotating means (Fig. 33, element 30), a movable section (Fig. 1, element 8) which is equipped with either focus coil and tracking coil (Fig. 1, elements 3 and 4) or focus magnetic field means (Fig. 1, element 6) and tracking magnetic field means for moving said objective lens to an optical axis direction (z-axis) and a tracking direction orthogonal to said optical axis direction (y-axis) and a fixed section (Fig. 1, element 11) for supporting said movable section and having either focus magnetic field means and tracking magnetic field means for said focus coil and said tracking coil or focus coil and tracking coil for said focus magnetic field means and said tracking magnetic field means (Fig. 1, elements 3, 4 and 6), wherein: wherein: an x-coordinate value of a center of gravity G (Fig. 2a-c, element 17) and an x-coordinate value of a driving center Df do not accord with each other (Fig. 2a-c, element 28), provided that a z-axis is set to pass through the center of gravity of the movable section in a direction parallel to the optical axis (Fig. 2a), a y-axis is set in said moving direction of the lens (Paragraph [0026], line 28), an x-axis is set in a direction orthogonal to the z-axis and the y-axis (Fig. 4), the center of gravity of said movable section is G (Fig. 2, element 17), and a driving center of the movable section in the z-axis direction is Df (Fig. 2, element 28).

In regards to claim 12, Ito et al discloses the optical disk drive apparatus as cited

Art Unit: 2627

in claim 9, wherein: said focus coil and tracking coil (Fig. 2a-c, elements 3 and 4), and said focus magnetic field means and said tracking magnetic field means (Fig. 2a-c, element 6) provided for said focus coil and said tracking are arranged across said objective lens (Fig. 2a-c, elements 3, 4, and 6 are opposite from the objective lens 1).

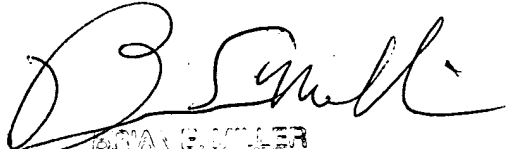
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LW
01/19/07


BRIAN G. MILLER
PRIMARY EXAMINER